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=> FILE CAPLUS

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FILE 'CAPLUS' ENTERED AT 15:21:15 ON 21 DEC 2000  
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FILE COVERS 1967 - 21 Dec 2000 VOL 133 ISS 26  
FILE LAST UPDATED: 20 Dec 2000 (20001220/ED)

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=> S 252726-88-8/rn OR 252726-85-5/rn

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      1 252726-88-8
      0 252726-88-8D
      1 252726-88-8/RN
        (252726-88-8 (NOTL) 252726-88-8D )
      1 252726-85-5
      0 252726-85-5D
      1 252726-85-5/RN
        (252726-85-5 (NOTL) 252726-85-5D )
L1      1 252726-88-8/RN OR 252726-85-5/RN
```

=> D L1 IBIB AB

L1 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2000 ACS

.   ACCESSION NUMBER:           1999:795986   CAPLUS  
      DOCUMENT NUMBER:           132:46956  
      TITLE:                    Bacterial mannanases and their gene sequence and  
                                   industrial applications  
      INVENTOR(S) :           Kauppinen, Markus Sakari; Schulein, Martin; Schnorr,  
                                   Kirk; Andersen, Lene Nonboe; Bjornvad, Mads Eskelund  
      PATENT ASSIGNEE(S) :       Novo Nordisk A/S, Den.  
      SOURCE:                   PCT Int. Appl., 242 pp.  
                                   CODEN: PIXXD2  
      DOCUMENT TYPE:           Patent  
      LANGUAGE:                English  
      FAMILY ACC. NUM. COUNT:   1  
      PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9964619	A2	19991216	WO 1999-DK314	19990610
WO 2000064619	A3	20000302		
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
PRIORITY APPLN. INFO.:			US 1998-111256	19980610
			DK 1998-1340	19981020
			DK 1998-1341	19981020
			US 1998-105970	19981028
			US 1998-106054	19981028
			DK 1998-1725	19981223
			DK 1999-306	19990305
			DK 1999-307	19990305
			DK 1999-308	19990305
			DK 1999-309	19990305
			US 1999-123543	19990309
			US 1999-123623	19990310
			US 1999-123641	19990310
			US 1999-123642	19990311

AB   Novel mannanases comprising an amino acid sequence such as that  
 comprising  
 positions 31-330 of the .beta.-1,4-mannanase from Bacillus sp. I633, or  
 their homologs or encoded by polynucleotide mols. that encode a  
 polypeptide that is at least 65% identical to the the Bacillus I633 amino  
 acid sequence are provided. Mannanases and their genes are also provided  
 from Bacillus sp. AAI12, B. agaradhaerens, B. halodurans, Bacillus sp.  
 AA349, B. clausii, B. licheniformis, Humicola insolens, and  
 Caldicellulosiruptor. The mannanases are alk. and are useful e.g. in  
 cleaning compns., in a fracturing fluid useful to fracture a subterranean  
 formation (oil drilling), for modifying plant material, and for treatment  
 of cellulosic fibers and fabrics.

L1 ANSWER 1 OF 4 REGISTRY COPYRIGHT 2000 ACS  
RN 252726-88-8 REGISTRY  
CN Mannanase, endo-1,4-.beta.- (Bacillus strain I633) (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN 59: PN: WO9964619 SEQID: 2 claimed protein  
FS PROTEIN SEQUENCE  
MF Unspecified  
CI MAN  
SR CA  
LC STN Files: CA, CAPLUS

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
\*\*\* USE 'SQD' OR 'SQIDE' FORMATS TO DISPLAY SEQUENCE \*\*\*  
1 REFERENCES IN FILE CA (1967 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L1 ANSWER 2 OF 4 REGISTRY COPYRIGHT 2000 ACS  
RN 252726-85-5 REGISTRY  
CN 1-300-Mannanase, endo-1,4-.beta.- (Bacillus strain I633) (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN 57: PN: WO9964619 SEQID: 2 claimed protein  
FS PROTEIN SEQUENCE  
MF Unspecified  
CI MAN  
SR CA  
LC STN Files: CA, CAPLUS

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
\*\*\* USE 'SQD' OR 'SQIDE' FORMATS TO DISPLAY SEQUENCE \*\*\*  
1 REFERENCES IN FILE CA (1967 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L1 ANSWER 3 OF 4 REGISTRY COPYRIGHT 2000 ACS  
RN 252726-70-8 REGISTRY  
CN Mannanase, endo-1,4-.beta.- (Bacillus strain I633 precursor) (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN 2: PN: WO9964619 SEQID: 2 claimed protein  
FS PROTEIN SEQUENCE  
MF Unspecified  
CI MAN  
SR CA  
LC STN Files: CA, CAPLUS

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
\*\*\* USE 'SQD' OR 'SQIDE' FORMATS TO DISPLAY SEQUENCE \*\*\*  
1 REFERENCES IN FILE CA (1967 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L1 ANSWER 4 OF 4 REGISTRY COPYRIGHT 2000 ACS  
RN 252726-46-8 REGISTRY  
CN Mannanase, endo-1,4-.beta.- (Bacillus strain I633) fusion protein with peptide (synthetic linker) fusion protein with cellulase (Clostridium thermocellum strain YS gene cipB fragment) (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN 4: PN: WO9964619 SEQID: 4 claimed protein  
FS PROTEIN SEQUENCE  
MF Unspecified

CI MAN  
SR CA  
LC STN Files: CA, CAPLUS

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
\*\*\* USE 'SQD' OR 'SQIDE' FORMATS TO DISPLAY SEQUENCE \*\*\*  
1 REFERENCES IN FILE CA (1967 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

=> D L1 SQIDE 1-4

L1 ANSWER 1 OF 4 REGISTRY COPYRIGHT 2000 ACS  
RN 252726-88-8 REGISTRY  
CN Mannanase, endo-1,4-.beta.- (Bacillus strain I633) (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN 59: PN: WO9964619 SEQID: 2 claimed protein  
FS PROTEIN SEQUENCE  
SQL 460

SEQ 1 NANSGFYVSG TTLYDANGNP FVMRGINHGH AWYKDQATTA IEGIANTGAN  
=====

51	TVRIVLS	DGG	QWKDDI	HTV	RNLIS	LAEDN	HLVAV	PEVHD	ATGYD	SIASL
101	NRAVDY	WIEM	RSALIG	KEDT	VIINIA	NEWF	GSWEG	DAWAD	GYKQA	IPRLR
151	NAGLNH	TLMV	DAAGWG	QFPQ	SIHDY	GREVF	NADPQR	NTMF	SIHMY	EYAGG
201	NASQVR	TNID	RVLNQD	LALV	IGEFGR	HRTN	GDVDE	ATIMS	YSEQR	GVGWL
251	AWSWKG	NGGPE	WEYLDL	SNDW	AGNNLT	TAWGN	TIVNGP	PYGLR	ETSRL	STVFT
301	GGGSDG	GTSP	TTLYDF	EGSM	QGWGT	GSSLG	GPWAV	TEWSS	KGSHS	LKADI
351	QLSSNS	SQHYL	HVIQNT	SLQQ	NSRIQA	TVKH	ANWGS	SVGNM	TARLY	VKTGH
401	GYTWYS	GSFV	PINGSS	GTTL	SLDLS	NVQNL	SQVRE	IGVQF	QSASD	SSGQT
451	SIYIDN	VIVE								

HITS AT: 2-18  
MF Unspecified  
CI MAN  
SR CA  
LC STN Files: CA, CAPLUS

1 REFERENCES IN FILE CA (1967 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L1 ANSWER 2 OF 4 REGISTRY COPYRIGHT 2000 ACS  
RN 252726-85-5 REGISTRY  
CN 1-300-Mannanase, endo-1,4-.beta.- (Bacillus strain I633) (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN 57: PN: WO9964619 SEQID: 2 claimed protein  
FS PROTEIN SEQUENCE  
SQL 300

SEQ 1 NANSGFYVSG TTLYDANGNP FVMRGINHGH AWYKDQATTA IEGIANTGAN  
=====

51	TVRIVLS	DGG	QWKDDI	HTV	RNLIS	LAEDN	HLVAV	PEVHD	ATGYD	SIASL
101	NRAVDY	WIEM	RSALIG	KEDT	VIINIA	NEWF	GSWEG	DAWAD	GYKQA	IPRLR
151	NAGLNH	TLMV	DAAGWG	QFPQ	SIHDY	GREVF	NADPQR	NTMF	SIHMY	EYAGG
201	NASQVR	TNID	RVLNQD	LALV	IGEFGR	HRTN	GDVDE	ATIMS	YSEQR	GVGWL
251	AWSWKG	NGGPE	WEYLDL	SNDW	AGNNLT	TAWGN	TIVNGP	PYGLR	ETSRL	STVFT

HITS AT: 2-18  
MF Unspecified  
CI MAN  
SR CA  
LC STN Files: CA, CAPLUS

1 REFERENCES IN FILE CA (1967 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L1 ANSWER 3 OF 4 REGISTRY COPYRIGHT 2000 ACS  
RN 252726-70-8 REGISTRY

CN Mannanase, endo-1,4-.beta.- (Bacillus strain I633 precursor) (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 2: PN: WO9964619 SEQID: 2 claimed protein

FS PROTEIN SEQUENCE

SQL 490

SEQ 1 LNNGFKKIFS ITLSLLASS ILFVSGTSTA NANSGFYVSG TTLYDANGNP  
=====

51	FVMRGINHGHA	AWYKDQATTA	IEGIANTGAN	TVRIVLSDGG	QWTKDDIHTV
101	RNLISLAEDN	HLVAVPEVHD	ATGYDSIASL	NRAVDYWIEM	RSALIGKEDT
151	VIINIANEWF	GSWEGDAWAD	GYKQAIPLRL	NAGLNHTLMV	DAAGWGQFPQ
201	SIHDYGREVF	NADPQRNTMF	SIHMYEYAGG	NASQVRTNID	RVLNQDLALV
251	IGFEGHRHTN	GDVDEATIMS	YSEQRGVGWL	AWSWKGNGPE	WEYLDLSNDW
301	AGNNLTAWGN	TIVNGPYGLR	ETSRLSTVFT	GGGSDGGTSP	TTLYDFEGSM
351	QGWGTGSSLG	GPWAVTEWSS	KGSHSLKADI	QLSSNSQHYL	HVIQNTSLQQ
401	NSRIQATVKH	ANWGSVGNMG	TARLYVKTGH	GYTWYSGSFV	PINGSSGTTL
451	SLDLSNVQNL	SQVREIGVQF	QSASDSSGQT	SIYIDNVIVE	

HITS AT: 32-48

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS

1 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L1 ANSWER 4 OF 4 REGISTRY COPYRIGHT 2000 ACS

RN 252726-46-8 REGISTRY

CN Mannanase, endo-1,4-.beta.- (Bacillus strain I633) fusion protein with peptide (synthetic linker) fusion protein with cellulase (Clostridium thermocellum strain YS gene cipB fragment) (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 4: PN: WO9964619 SEQID: 4 claimed protein

FS PROTEIN SEQUENCE

SQL 476

SEQ 1 ANSGFYVSGT TLYDANGNPF VMRGINHGHA WYKDQATTAI EGIANTGANT  
=====

51	VRIVLSDGGQ	WTKDDIHTVR	NLISLAEDNH	LVAVPEVHDA	TGYDSIASLN
101	RAVDYWIEMR	SALIGKEDTV	IINIANEWF	SWEGDAWADG	YKQAIPLRLN
151	AGLNHTLMVD	AAGWGQFPQS	IHDYGREVF	ADPQRNTMFS	IHMYEYAGGN
201	ASQVRTNIDR	VLNQDLALVI	GEFGHRHTNG	DVDEATIMSY	SEQRGVGWLA
251	WSWKGNGPEW	EYLDLSNDWA	GNNLTAWGNT	IVNGPYGLRE	TSRLSTVFTA
301	SPEPTPEPTA	NTPVSGNLKV	EFYNSNPSDT	TNSINPQFKV	TNTGSSAIDL
351	SKLTLRYYYT	VDGQKDQTFW	CDHAAIIGSN	GSYNGITSNV	KGTFVKMSSS
401	TNNADTYLEI	SFTGGTLEPG	AHVQIQGRFA	KNDWSNYTQS	NDYSFKSRSQ
451	FVEWDQVTAY	LNGVLVWGKE	PGGSVV		

HITS AT: 1-17